US Army Corps of Engineers
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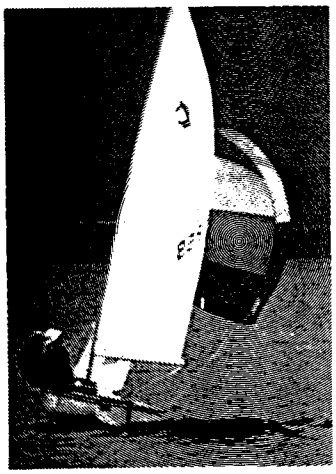

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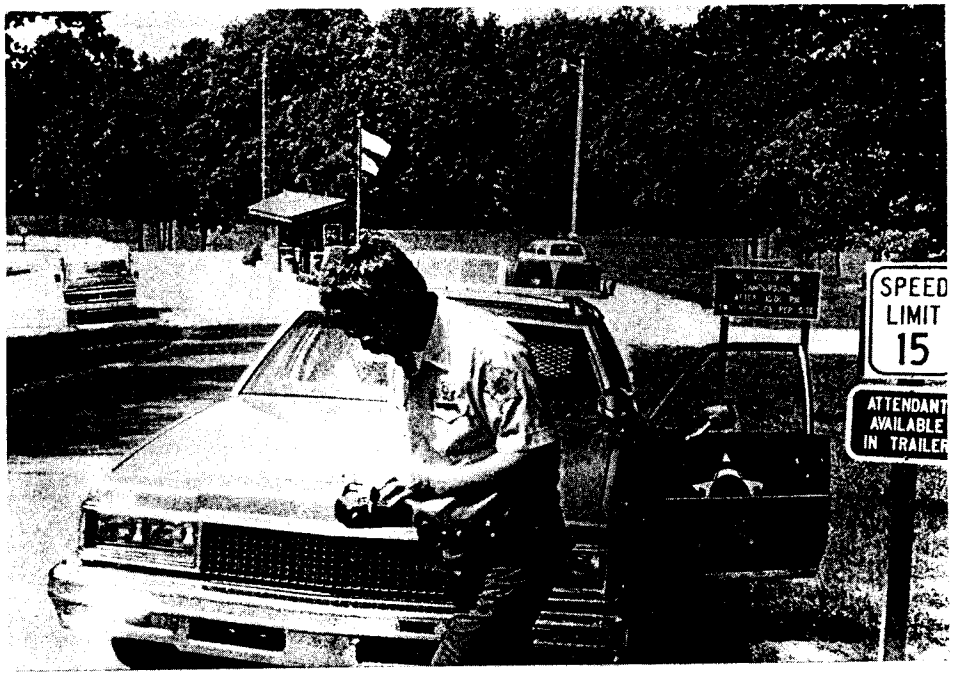



**Deputy sheriff using watchman's clock at Nolin River Lake**

# Watchman's Clocks Used In Cooperative Law Enforcement Agreements

*Robert Barnett, Park Manager*
*Nolin River Lake, Ky.*
*Louisville District*

Many projects in the Louisville District have cooperative agreements with local sheriff departments for patrol of recreation areas during high-use periods. In recent years, several of these projects have used watchman's clocks to document the activity and movements of deputies patrolling within the scope of these agreements. The clocks produce a record showing the location and exact time a deputy makes his patrol.

Each location has a key with a different number. The keys are chained inside our traffic counter boxes to protect them from vandalism or removal. Each deputy has a clock. When he enters the recreation area, the deputy inserts the key in the clock and turns it. This prints the time and location number on the tape. Each Monday the sheriff's secretary opens the clock with a special control key and removes the printed portion of the tape.

Pen-and-ink entries are made on the tape to show the beginning and ending dates. (Newer model clocks print the date with the time and location.) Each time the clock is opened, a record is made on the tape.

Four lakes are currently using the clocks at 20 stations in 9 counties. The only malfunctions have been dead batteries. Replacing the standard D-cell battery and paper tape periodically has kept the clocks functioning properly for 5 years. Batteries should be removed during the off-season to protect the clocks from leakage and corrosion. The initial investment was $315 per clock plus $12.50 for tape for a season.

This record can provide useful information to the sheriffs and project personnel. Each summer, complaints are received from disgruntled visitors alleging inadequate patrolling of an area, allowing loud parties, etc., to continue all night. The tapes can be used to refute these allegations.

The record also provides useful documentation for future audits. There are many instances of deputies working when no Government representatives are on duty to verify their performance. This record protects deputies from false accusations concerning when or where they patrolled.

# Recreation Facilities Guide

*Janice Holmes*
*Walla Walla District*

Have you ever had a phone call requesting detailed information concerning a park that you couldn't answer off the top of your head? Often the resource staff on a project may need to respond to a visitor request for information on a park located nearby or on another project in their District. Or have you ever wanted to do a quick comparison of facilities in Park A located on Project X to Park B located on Project Y? In the District office, in particular, we often find ourselves in this position. Many of us at one time or another have been faced with the embarrassing situation of being asked for information about a park and not knowing the answer immediately or not having a ready reference to locate the information. Public visitors are usually not aware of Corps boundary lines for projects and Districts, and expect fairly detailed information to be readily available.

The Walla Walla District solution to this problem has been the development of the Recreation Facilities Guide. The Guide is printed in book format and provides information on every park in the District, both Corps managed and leased areas, and highly developed and primitive areas, including wildlife management units. Information is also provided on parks located adjacent to Corps project lands. Parks operated by an adjacent District but located near Walla Walla District projects are also included. A simple map is provided for each project.

Information for each area is printed on two facing pages and includes: location of the park; description of the area; facilities; user fees, if any; managing agency; administering Corps office; hours and season of operation; emergency phone numbers; and space for comments.

All information was recently transferred from the Harris mainframe computer to microcomputers and is stored in page format. Blank pages may be printed out when it is necessary to add an area. In the past, corrections have been made by text writers in the Automatic Data Processing Division; with the addition of the Information Management Office, corrections will be made by their staff. In the future we will copy the data to project computers so that corrections can be made at any time and submitted once a year to the District office.

Updating the guide is a simple procedure. It is reviewed annually in the spring, and only those pages that have corrections are reprinted. The book is fastened with Acco fasteners and has only a heavy paper stock cover. The old pages are easily removed and the new pages inserted. When a large number of pages are reprinted, the cover is also reprinted in a different color to reduce confusion with previous editions. Every 5 to 7 years the complete book is reprinted. Each page is dated with the month and year as a reference for the most recent change in information; consequently, pages in the same book may be dated for a number of different years.

Distribution of the Recreation Facilities Guide is made to all project offices in the District, other

Districts in our Division, our Division office, local Chambers of Commerce, tourism offices, libraries, sheriffs, etc. The Guide is not restricted but rather is made available to practically any business or organization that would have an interest in or provide information on Corps recreation facilities in our District. However, we don't normally make wholesale distribution to individuals unless they have a particular need. Approximately 250 copies of the Guide are in distribution, and a computer file is maintained for the mailing list.

The Recreation Facilities Guide has proved to be a convenient, ready reference for parks and facilities in the Walla Walla District. Continued use is anticipated for the future.

# Management Conflicts At Multipurpose Lakes

*H. Roger Hamilton*
*Resource Analysis Group, EL*

*Condensed from a presentation to*
*North American Lake Management Society Conference*
*Austin, Tex., 28 July 1987*

This article cites some examples of conflicting uses at Corps of Engineers lakes, discusses some of the reasons for conflicts, and identifies some research developments that can help manage the conflicts.

The US Army Corps of Engineers has developed and manages 463 lakes that encompass 11.5 million acres of land and water. The lakes are ringed with 54,859 miles of shoreline at the conservation pool elevation. During 1986, these lakes were host to 1.7 billion visitor hours of use (Office, Chief of Engineers (OCE) 1976), prevented an estimated $16.7 billion in flood damages, produced an estimated 88 billion kilowatt-hours of electrical energy, stored 270.6 million acre-feet of water supply, and helped move nearly 2 billion tons of commerce (OCE 1987).

The United States Congress authorized the construction of these projects for a variety of purposes, which are listed below:

| *Purpose* | *Number* |
|---|---|
| Flood control | 338 |
| Navigation | 156 |
| Power | 82 |
| Irrigation | 41 |
| Pollution abatement | 56 |
| Beach erosion | 34 |
| Recreation | 305 |
| Fish and wildlife | 148 |
| Water supply | 109 |

Source: OCE (1986).

## Examples of Conflicts

Planning, construction, and management of the lakes are directed toward optimization of the authorized purposes so that the public receives the most benefits for the investment. However, conflict is inevitable when one considers the magnitude of the Corps' water resources development program and the number of lives that are affected by it.

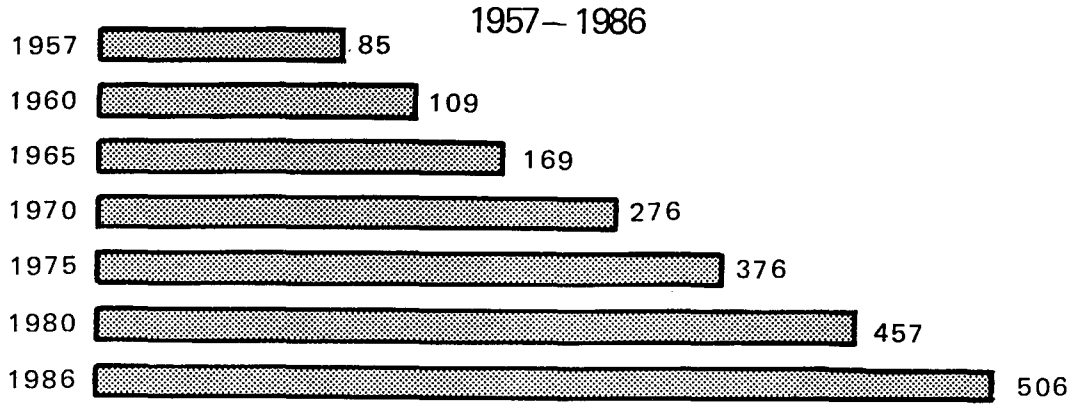
It is possible to assign conflicts to broad categories. This technique is particularly helpful in identifying specific problems and determining cause-and-effect relationships.

***Conflicts among project purposes.*** Is water more valuable when stored as municipal or industrial water supply, when stored to prevent flood damages, when used as a navigation conveyance, when passed through a turbine to generate electricity, or when used to support a fishery or recreation activities such as boating or swimming?

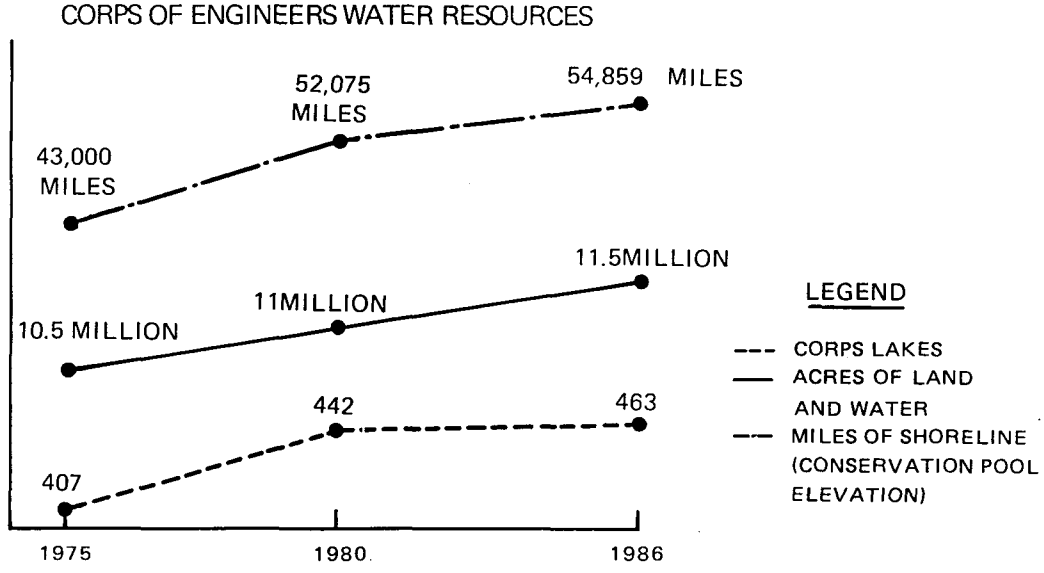
These questions arise in the plan formulation stages of a project and remain through its operational life as changes in the demands and expectations of local and regional customers and society at large evolve.

The North Texas Water District has proposed to transfer water from Lake Texoma to Lake Lavon. Conflicts among water supply, hydropower, recreation, navigation, water quality, and flood control interests are inherent in this proposal and must be addressed before a decision is rendered.

Potential adverse impacts on recreation could result at Lake Texoma by lowering the pool.

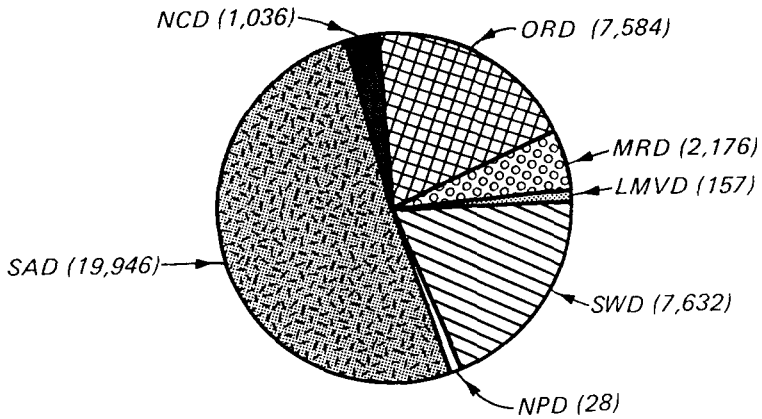



**Outdoor Recreation Use at Corps of Engineers Multipurpose Lakes, 1957-1986, in Millions of Recreation Days**




**Corps of Engineers Lakes, Acres of Land and Water and Miles of Shoreline, 1975-1986**

**Number of Lakeshore Use Permits in Each Corps of Engineers Division, 1986**




Navigation locks under construction on the Red River in Louisiana are dependent on releases from Lake Texoma. Water supply for the city of Dallas and neighboring communities would be enhanced.

***Conflicts in land use.*** Competition for available natural resources manifests itself in a variety of ways. For example, the lakeshore management program is implemented to manage private, exclusive use of public lands and waters at 100 lakes where such activities were authorized during times when competition was not as keen as it is today. Lakeshore use permittees constitute a segment of the public served by the Corps that has been very vocal concerning their use of public resources. Use patterns have been altered in some cases; for example, at Lewisville Lake, permittees are petitioning to have a public boat launching ramp closed because the public use interferes with their use of the area.

***Conflicts among special populations.*** Conflicts exist among age groups. Section 1127 of the Water Resources Development Act of 1986 (Public Law 99-662) authorized the Corps to develop campgrounds for senior citizens (over 62 years of age) at Sam Rayburn Lake. Clearly, proponents of the legislation sought to separate activities of younger park users from those of the elder population.

Development of special facilities for handicapped people has been generally well done. However, some criticism has been received from the handicapped population and others for creating, in some cases, too many special facilities relative to the number of handicapped users and separating that population from other users.

***Conflicts among recreation uses.*** While conflicts exist between authorized project purposes, conflicts also arise within a given purpose. Recreation use of a finite area of water surface is not compatible for sailing, waterskiing, and bass fishing, simultaneously. Passive nature study or mere enjoyment of the solitude of the outdoors is not possible when activities such as use of off-road vehicles are under way.

## Reasons for Conflicts

As is the case with most complex issues, simple solutions do not exist because the reasons for the problems are not simple. Reasons for conflicting uses at Corps projects are manifold. One can begin the list with the basic reasons for the water development. Competition surfaces during the planning phase, as the special interest groups vie for use of the water surface and its attendant land base. Each proponent declares his greater need for the water to be stored, and each opponent declares his losses to be suffered by the intended impoundment.

Our nation is rapidly becoming urbanized. Most Corps lakes are now within 50 miles of a major urban area. Many projects were constructed in rural areas several years ago, but now are surrounded by urban development. During the 1950s, demands for resources at these lakes were quite low. Land acquisition was minimal, facilities provision was sparse, and general stewardship of the land was considered relatively unimportant. Rapid urban development, virtually on the lakeshores—coupled with increased mobility, increased leisure

time, and larger disposable income of the average American—have resulted in greatly increased competition for use of the limited supply of natural resources in these public estates.

Much of the urbanization of areas around Corps lakes is induced by the lake itself. It attracts people. Water is a magnet. People want to be in, at, or near it and have built their homes and vacation retreats within easy access of water.

With the US population transition from rural to urban life comes additional changes. Value systems among city dwellers are quite different from those of rural residents. The pace of life is generally faster and more active. Recreation demands by urbanites are usually not the same as for rural populations. Competition for space is keen and results in a variety of demands and expectations that have only recently been recognized.

The migration from the frost-belt of the northern latitudes to the sun-belt of the south has brought about a mixing of cultural backgrounds, which may translate into differences in values, preferences, and expectations of our current customers compared to the public we served when the bulk of our projects were planned and developed. We do not yet fully understand all the ramifications of these changes (or, for that matter, what the changes are). The end result could be different requirements to satisfy the customer needs.

The dynamics of the growth and settlement of our young country require that we constantly reexamine and adjust our infrastructure to accommodate current needs. Water resources is no exception.

## Tools That Might Help

Several important questions are apparent when we think about conflicts that arise in managing our limited resources.

- Do we know who our customers are?
- Do we know what they want? What they need?
- Can our resource base support the development and use demands?
- Are the correct facilities being provided? In the right places?
- Are the use and management conflicts real or perceived?
- What tools are available to help management?

Recreation use estimation procedures have been developed to determine numbers of recreation visitors and the activities in which they engage at developed parks (Mischon and Wyatt 1979, OCE 1976). Work is under way to devise methods of calculating the same kind of information for undeveloped areas. Accurate, basic use information is essential to begin to identify and understand the elementary problems and how one might approach possible solutions.

A handbook has been published which can be effective in the determination of physical and social carrying capacities of natural resources for recreation activities (Urban Research and Development Corporation 1980). Two additional volumes (Waring and Snepenger 1985, Waring 1987) identify key indicators of recreation use and can be used by both planners and managers to predict visitation patterns.

Five years of trend data are available for Corps fee campgrounds (Curtis et al. 1982, Curtis and Hansen 1982, Curtis 1983, Fritschen 1985, Lawrence and Fritschen 1986, Lawrence 1987). This information is useful in planning and managing fee camp areas and in managing the fee program.

Techniques have been developed and tested which provide a quantitative, trackable system for evaluating visual impacts of changes that are proposed to the landscape (Smardon et al., in preparation). This technology has been used effectively in assessing aesthetic effects of proposed development and resolving conflicts early in the planning stages before the actual development occurs. It has also been used in a court case to resolve conflicting desires of opposing groups.

Land use planning methodology is being developed for the US Army Training and Doctorate Command employing the use of a Geographical Information System at Fort Benning, Georgia. Work is not yet complete, but it is already apparent that this tool will have direct applicability for development of similar technology on water resource projects.

Additional tools exist and are being developed to address problems and resolve conflicts. Some conflicts or problems are often opportunities in disguise. The smart manager will know what tools

are available for his use, how and when to use them, and how to convert problems into opportunities.

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This bulletin is published in accordance with AR 310-2. It has been prepared and distributed as one of the information dissemination functions of the Environmental Laboratory of the Waterways Experiment Station. It is primarily intended to be a forum whereby information pertaining to and resulting from the Corps of Engineers' nationwide Natural Resources Research Program can be rapidly and widely disseminated to OCE and Division, District, and project offices as well as to other Federal agencies concerned with outdoor recreation. Local reproduction is authorized to satisfy additional requirements. Contributions of notes, news, reviews, or any other types of information are solicited from all sources and will be considered for publication so long as they are relevant to the theme of the Natural Resources Research Program, i.e., to improve the effectiveness and efficiency of the Corps in managing the natural resources while providing recreation opportunities at its water resources development projects. This bulletin will be issued on an irregular basis as dictated by the quantity and importance of information to be disseminated. Communications are welcomed and should be addressed to the Environmental Laboratory, ATTN: A. J. Anderson (CEWES-EP-R), U.S. Army Engineer Waterways Experiment Station, PO Box 631, Vicksburg, MS 39180-0631, or call AC (601) 634-3657.